

GREEN TRAILS AS CATALYST:  
REVITALIZATION OF SIX POST-MINING TOWNS IN ILLINOIS

BY

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THESIS

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## ABSTRACT

This thesis aims to illustrate a strategy for revitalizing post-mining towns for their important history and culture. Since being surrounded with features from the past is considered an excellent way to learn about the environment and history (Lynch 1972, 53), this thesis proposes to generate *green trails* to connect the features and form a story-telling setting, exhibiting the post-mining towns' past, thus revitalizing the post-industrial towns' culture. Afterwards, by generating *green trails* and programming by using the strategy of *incremental urbanism*, the post-mining towns could also be economically, industrially, and academically revitalized.

The study site for this thesis includes six mining towns in Illinois on the outskirts of the Chicago metropolitan region: Braidwood, Coal City, Diamond, Carbon Hill, Godley, and Braceville. Each of the towns once had a very proud industrial history. However, as industrial economy continues to change over decades, old industrial sites may get lost in the transition; cultures related to people's lives in the old industrial era then change as well. Instead of ignoring the towns' important history, there is an opportunity to reveal it and make the towns culture playgrounds for nearby metropolitan cities, in this case, Chicago. To achieve revitalization, these important post-industrial towns are proposed as part of the regional cultural heritage, to be preserved and probably designed. Based on theories of Kevin Lynch and Rem Koolhaas, as well as information from site and regional surveys, the strategy developed in this thesis could also be applied in other post-mining towns.

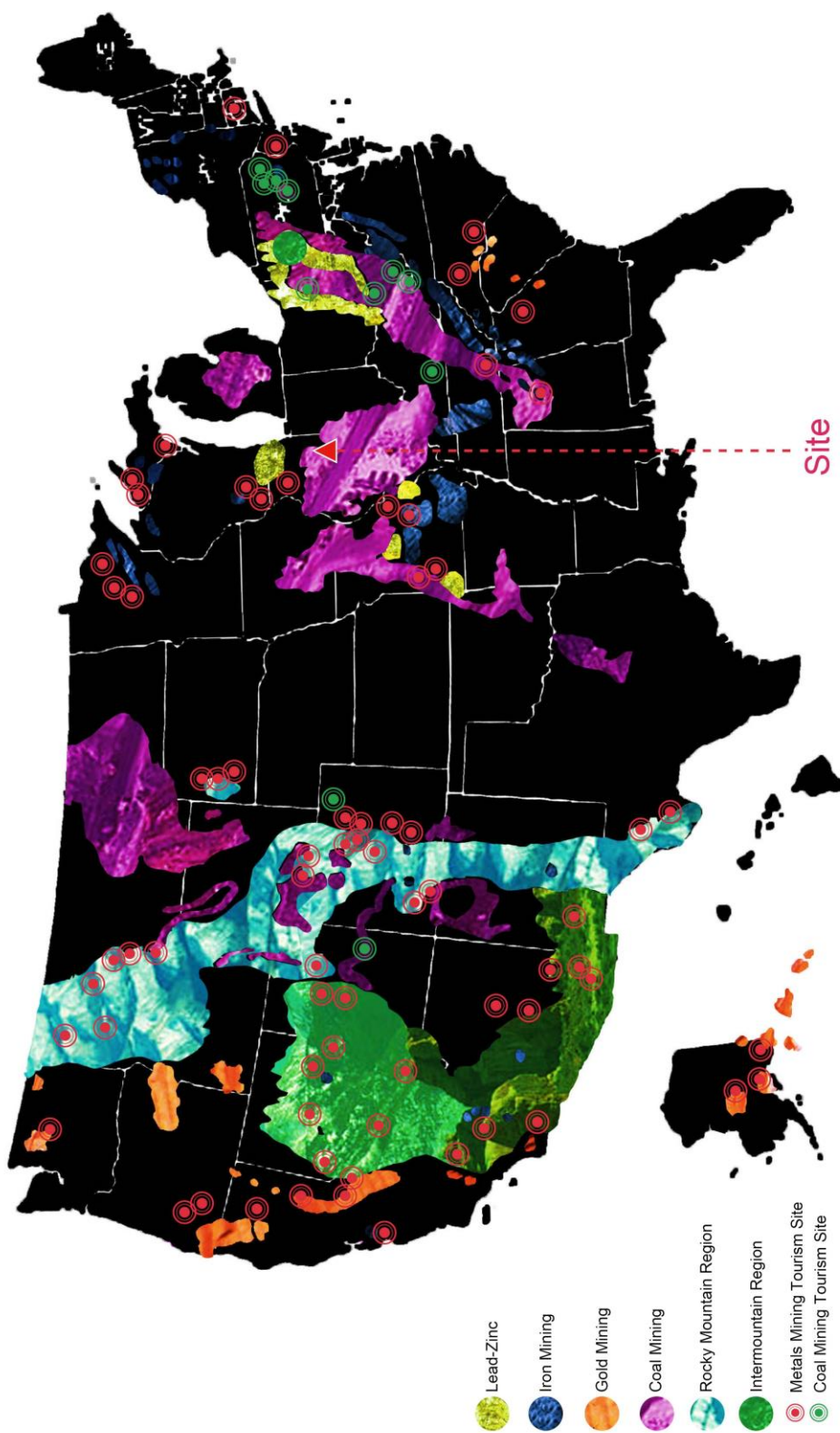
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## 1. INTRODUCTION

In some post-mining towns, past industrial features are still present in the landscape, such as mounds, pits, old railways, etc. These features could be very good media for teaching visual and material history. However, the features are fast-disappearing, being covered by new forests or constructions. Since experiencing the landscapes of post-mining towns may be considered as “the process of interpreting the significance of place through the body” (Tilley 1999, 108), the perfect laboratory for people to experience history by directly seeing the features, we see that losing such a good resource would be a big loss for the environment and the society. So, before it is too late, we should propose these towns as cultural heritage, to maintain the cultural landscape and increase public awareness. The revitalization of the culture is also correlative with other aspects, such as local economic, industrial, and academic condition.

In the past, mining towns were the hub of business activities. Their economic advantages attracted people to visit and trade. However, as old industries adapted to new forms, these post-mining towns lost their advantages in both trade and traditional industry. People’s lives changed as they started to rely on new means of livelihood, and cultures related to older lifestyles from the previous industrial era were then lost. Over the last 150 years, since the coal industry experienced its heyday, even though a considerable number of post-mining towns have developed industry-related tourism, much undeveloped landscape remains (Figure 1.1). In fact, each kind of post-mining landscape should have its own meaningful memories and cultures.



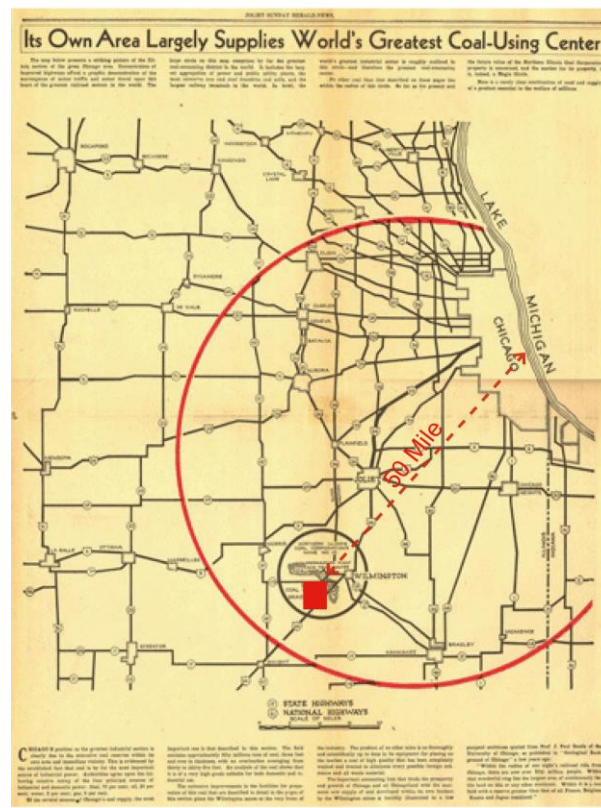
**Figure 1.1** Historic mining areas across the United States.  
 Francaviglia (1991, 6-7, 196-197); modified by the author.

Even non-tourism-related post-mining towns should have the opportunity to be developed, to tell their stories, so that visitors there will gain understanding and appreciation for the post-industrial landscape.

Specifically, six non-touristic post-coal-mining towns in Illinois were chosen for the study. They are on the outskirts of the Chicago metropolitan region, namely Braidwood, Coal City, Diamond, Carbon Hill, Godley, and Braceville. They are chosen for several reasons: first, they were very important coal industry trading centers (Figures 1.2 and 1.3) with diverse cultures, but are not yet developed in tourism; second, they are located on the outskirts of the Chicago



**Figure 1.2** News that indicates Southern Will County is the birthplace of United Mine Workers. *Men, Methods and Machines* 2012.

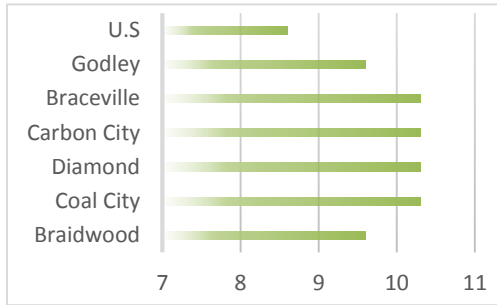


**Figure 1.3** News that indicates Grundy and Will County once supplied Chicago—the world's greatest coal-using center. *Men, Methods and Machines* 2012; modified by the author.

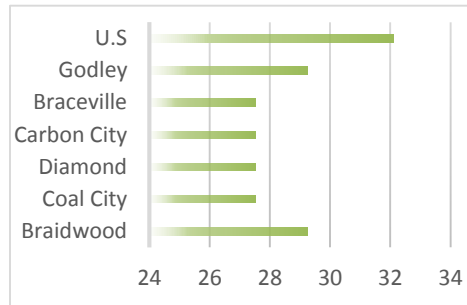
Metropolitan Region and can be easily reached. Considering the towns' specific industrial history and current environmental conditions, it is possible to consolidate the situation both economically and culturally through strengthening their cultural image, encouraging more people to visit and creating more new business, academic or commercial opportunities.

The coal mining industry in the six post-mining towns was shut down around 1960 (*Coal City, IL* 2005). Since then, people have been less attracted or connected to the post-mining towns, because they had lost their primary benefit from traditional coal mine industry and other kinds of industries were not yet fully developed. However, the land is full of important features that could stimulate people's memory. By walking or moving through these places, visitors can feel the industrial past of post-mining towns, which exists not only in the documentation in the museum, but also in post-mining landscapes in mounds, coal pits that are filled with surface and underground water, and railways. Therefore, in order to help post-mining towns regain their glorious past and to respect their proud industrial history, I suggest that these towns be reconnected by *green trails*, linking their disparate landscape features, thus providing people a stage to appreciate the visually distinctive scenery of post-mining towns and the special culture as well.

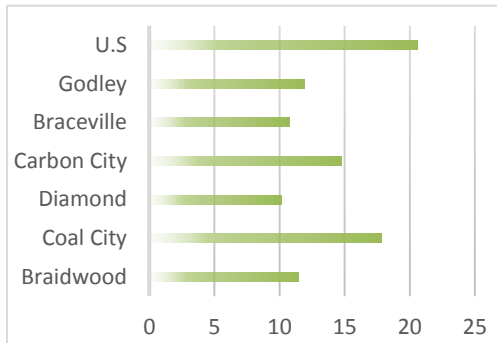
Chief among the six Illinois mining towns in this study, Braidwood was named the "cradle" (Donna 1957, 74) of the mine workers union in the United States. The productive past of these industrial workers won them a strong reputation in the past. Now, however, as the coal industry transits to new types of energy sources (such as nuclear, oil, natural gas), post-mining towns have lost their primacy in public awareness. As a result, post-mining towns are now generally facing a poor social and economic situation, as shown in the economic data (Figures 1.4, 1.5, 1.6, 1.7).



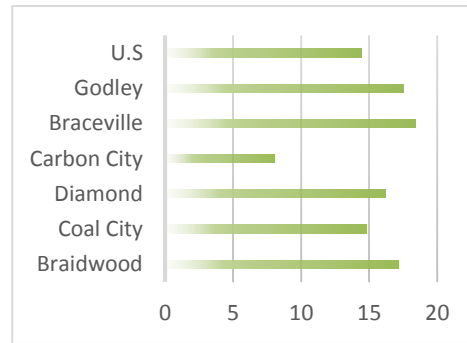
**Figure 1.4** Unemployment Rate (%).



**Figure 1.5** Future Job Growth (%).



**Figure 1.6** Professional (%).



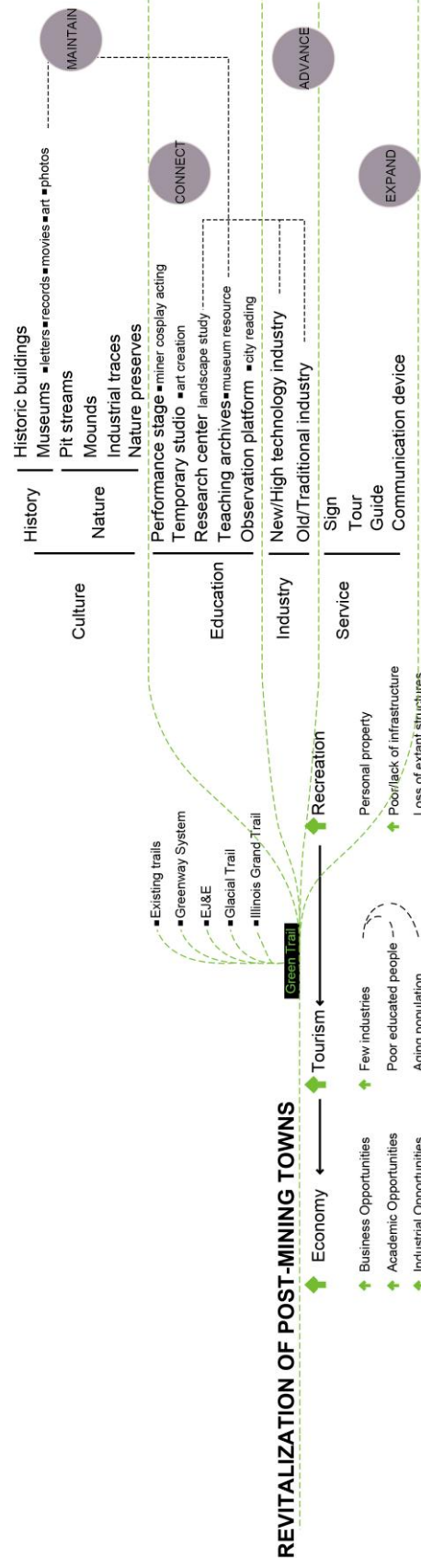
**Figure 1.7** Service (%).

Source of Figures 1.4, 1.5, 1.6, 1.7: *City Profile 2013*; modified by the author.

According to the economic data, job growth is projected to be much lower than average in the future, and unemployment is very high. These towns have quite a number of people working in the service sector, but few people are pursuing professional jobs. Generally speaking, people here are poorly educated, and too few people are working in professional area.

And here the proposition is made—perhaps the proposed green trail can contribute to local culture, education, industry, service, and then improve the recreation, tourism, and economy, to achieve the revitalization. More job opportunities could be gained, therefore employment rate could be increased; more professional people would be needed for multi-type jobs and the educational level could be improved, and the improved local services could be further utilized in the future with more programming coordinated with the *green trail*.





**Figure 1.8** The proposition of *green trail* revitalizes post-mining towns; diagramed by the author.

Designers have the opportunity to redevelop mining landscapes, to put their stories into the foreground, and spotlight industrial memories. The memories would belong to a miserably memorial sublime, a feeling of a "locus horribilus" (Grunenberg 1997, 195), which usually belongs to these forgotten places (Edensor 2005, 8). Such a place may not be beautiful, but one can spend some time to enjoy the moment of nostalgia. Though the moment is still dark or guilty, and considered as "black art" (Danahay 2000, 4), so-called because of coal's color as well as related to some coal miners' lives, these landscapes may also be fantastical and wonderful, and related to everyday cultural life.

This thesis also helps planners and designers to rethink our methods of dealing with some post-mining landscapes with important history. By taking full advantage of proximity of their market and transportation, local communities may improve cultural interpretation and programming of the heritage candidate sites. Based on the theories of Kevin Lynch and Rem Koolhaas (Czerniak 2001, 74), *Incremental urbanism* was adopted as the strategic framework. *Incremental urbanism* means that with continuous programming, and with infrastructural development over time, these isolated communities could rejoin the active economic and social network of towns and other parts of a metropolitan region. In particular, *green trails* may contribute to making incremental urban improvements for revitalizing post-mining towns (refer to Chapter 4).

## 2. INDUSTRIAL HISTORY OF THE SITE

In this study, the industrial history of the six towns in Grundy and Will Counties, which were once well-known for their coal production, are the focus. Among the six post-mining towns, Braidwood was central to the production of a vast amount of coal.

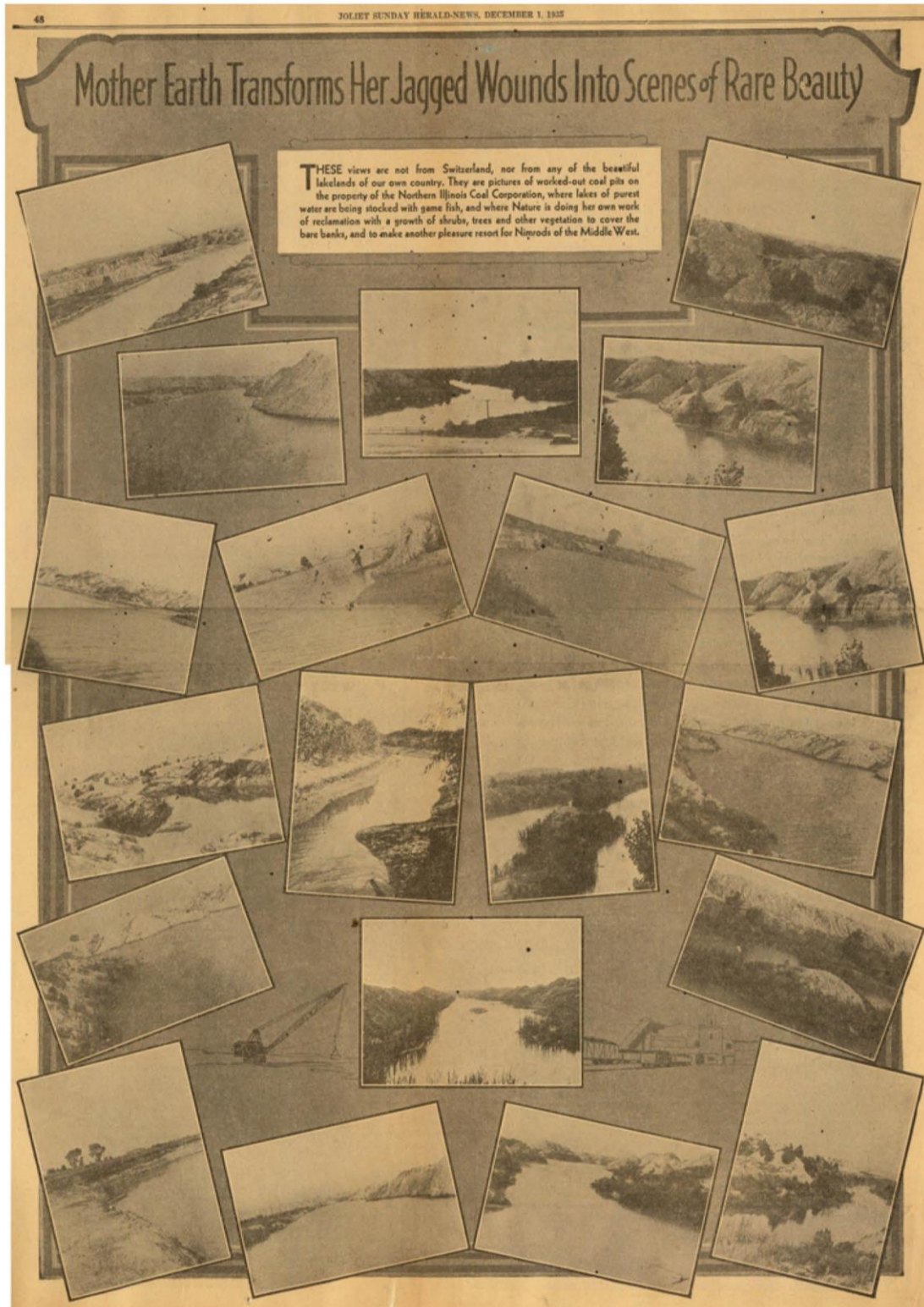
The coal mining "boom" in the northern fields of Illinois really dates from 1864. Around the town of Braidwood, a farmer struck coal while drilling a well for water. For the next 50 years, thousands of people came into Will, Grundy, and Kankakee Counties to seek their livelihood in the coal mines. The new coal mining industry spread along shipping routes to ease access to large commercial centers like St. Louis and Chicago. However, it wasn't until the Civil War, when Illinois railroads grew rapidly, that coal mining in Southern Illinois developed into a major industry. (*Illinois-Mines* 2012)

Coal production at the Braidwood mines was at its height in 1880s. After 1880s, coal production in Will County began to decline as miners exhausted the most easily reached portions of the shallow local deposits. In February 1883, rain and melted snow flooded a Diamond Coal Company mine, causing many deaths, and the local mines became much less productive (*Coal City, IL* 2004). By 1892, "Will County mines produced only 114,000 tons, less than a fifth of what they had a decade before and under 1 percent of the state's total output in that year" (*Coal City, IL* 2004). Afterwards, the coal industry was depressed for decades.

However, the coal industry revived a little in the 1920s by adopting new techniques of strip-mining. "Power shovels" and "Earth-moving equipment" were used to unearth coal (*Coal City, IL* 2004), and the machines left impressive traces on the land, which would be seen as a symbol of the post-mining towns. During the next 25 years, the coal industry was extremely productive. "The

traditional mines had been very important to local area in nineteenth century; however, these strip mines were active for only a generation. By the 1960s, the last coal mining operations in the Chicago region were closed” (*Coal City, IL* 2004). Another town, Coal City, whose “importance as a coal mining center has declined over the twentieth century” was also revived a little by strip mining. Today however, “...much of the landscape around Coal City's mines has been reforested and serves as an outdoor recreation area” (*Coal City, IL* 2004). Generally speaking, the coal mines in these two counties had been mined from 1865 to 1960, almost a century, although by 1940, only a small part of strip surface mining was still operating.

Today, the site has been reforested with wild beauty and the coal pits, indexes of machine-made traces on the land, have been filled with groundwater (Figure 2.1). Though most of the culturally valuable remnant infrastructure has disappeared during the process of reforestation, there are still ways to perceive the past by finding and revealing existing local features. The first step in this process should be proposing the post-mining towns as heritage candidates, thus the towns’ productive and meaningful history can be re-interpreted, and a revitalized future of abundant tourism and business opportunities can be imagined.



**Figure 2.1** News that indicates mining towns were remediated with wild beauty. *Men, Methods and Machines* 2012.

### 3. LITERATURE REVIEW

To preserve the cultural heritage of post-mining towns with important industrial history, and to maintain their landscape features and bestow benefits on future generation, mining landscape phenomenon is studied. Kevin Lynch's theory of historic preservation in his book *What Time Is This Place?* was studied to learn how to perceive time in historical places, and how to manage and value changing landscapes. Also, the theory suggested programs that contribute to interpret the culture and history of the places. In addition, in considering the post-industrial place as "cultural playground", Rem Koolhaas's Tree City concept was also studied. This concept takes incremental pathways as a method to increase connectivity between post-industrial place and surroundings, thus providing a stimulus for revitalization.

#### *Mining Landscape Phenomenon*

*Isolation* still remains a key characteristic for mining towns, although the environment was remediated many years ago. The isolation was caused from their physical remoteness, visual distinction from the surrounding countryside, and loss of visibility because they are covered by wild woods (Francaviglia 1991, 67-72). Though railroads were built to overcome isolation (72) and offered people better chances to reach the mining land to trade, after local industries shut down, the railroads lost their primary production and business, and again, the towns were isolated.

People in the nineteenth-century seemed to be in denial toward the mining landscape – they considered it as "guilty landscape, a failed product of industry and modernism, a black hole in

history, and an anti-aesthetic abyss” (Danahay 2000, 4). For most people, mining landscapes were guilty since they relate to a history of bitterness—hard workload, poor treatment, dirty and dusty working environment. Aesthetic appreciation for mining landscapes is influenced deeply by local culture and history, as well as the painful memory some people may hold.

However, “the phenomenology of landscape is the process of interpreting the significance of place through the body” (Tilley 1999, 108). Though the mining landscape might not be appreciated before, nor being attracting now, mining landscapes are especially excellent carriers of present-past connections, and mining regions that maintain both artificial and natural traces can well tell a story about industrial memory.

From the point of view of Laviolette (2011, 67), the aesthetical feeling for the cultural identity of mining landscapes is built by local people who maintain “the connections with the community and the past with aspirations for the future.” Even when cultural identity comes from places that may lack attractions, like the mining landscapes, they are still meaningful. Such a landscape possesses “undeniable cultural and historical value since it documents a long-term relationship between humans and the place where they have spent their lives” (Skaloš 2012, 60). Put another way, the post-mining landscape gives testimony of the industrial development, and records the industrial and human history in a way that can be visually apprehended.

Considering mining landscapes to be both heritage and cultural sites, at the end of 2007, the UK’s Living Landmarks Programme rejuvenated the derelict mining site of Robinson’s Shaft in Pool near Redruth (Figure 3.1). This project helped enhance people’s awareness of their local industrial past, and thus contributed to collecting historical experience and thoughts from

community members (Laviolette 2012, 69). This project elicits an excellent response from Dylan Trigg (2006, 243), who writes, “The conversion of memory warrants criticism. Instead of an ethical demand toward continuity, let us place memories in ruin.” Appreciation for ruins is considered by Dylan Trigg as a fabulous “model of post-rational aesthetics whereby an affirmative ethics of ruins challenges a fixed and unyielding spatial order” (Trigg 2006, 243). Ruins are a signal of the presence of the sublime, meaning what people are both scared of and still desire to know. The ruins, the dark coal history, the former special post-mining landscapes that we see today convey an idea about the order from before to now, and from an old order that has almost disappeared into barely visible traces.

We see that mining landscape is a cultural identity, a memory container. There are many real things left by the past, such as extant infrastructure or ruins, which have potential esthetic or cultural importance. To develop post-mining towns as heritage candidates, all landscape-based infrastructure should be respected for its local symbolism and power for collective memory.



**Figure 3.1** South Crofty from Robinson's Shaft, Pool, Cornwall, 2008. (Photo: K. Baird).



*Kevin Lynch—“What Time Is This Place?” (1972)*

Kevin Lynch states that, “to be surrounded by the buildings and equipment of the past ... is an excellent way to learn about it” (Lynch 1972, 53). The setting may show the full spectrum of its culture (54), and people who involved in it may feel the culture and nostalgia. As applied in this thesis, if as Lynch suggests we should take the important history and culture of the post-mining towns as the key to revitalize them, then the setting with various landscape features needs to be studied.

Lynch also mentions that an individual’s idea of time is correlative with the changing environment. Things keep changing: we as actors standing in the middle-range future, should care about managing the changes, and transition them well from the past to the future. Lynch also gives suggestions about what kinds of programs should be provided to achieve historical interpretation and culture transition. The history of post-mining towns was a source of pride for the communities, but also was something happened in the past and seems lost connection with the present and the future. According to Lynch, in this case, we should reveal and make some meaning of the history thus creating a good connection between the past, the present, and the future. Lynch thinks that the city itself can be a historical teaching device. Signs, tours, guides, and other communications devices could be provided (54). By conserving some parts of the cultural site, and at the same time programming some other parts, we could achieve a space that provides “heightened contrast and complexity” (57) with accumulated new and old things. Visitors could walk through them, and gain esthetic and also cultural experience (57).

Historic buildings could be an excellent way for people to feel the history by playing themselves as actors between the real settings, even counterfeiting them (52) as long as the creation of the fake could express appropriate knowledge and values (53). For example, a fake tipple (Figure 3.2) created under correct construction technology could be a good teaching device, people could make contact with thing directly and recall the image of its past. However, if the fake thing is not constructed in the right way or located where it belonged to in the past, the information from it may mislead the visitors. Under no circumstances should “fake” be identified as “extant”, however, and all reconstructions must announce themselves as such.

Also, books and tales and films are good media to tell the story of the environment, so these kinds of archives should be conserved. Memories and stories recorded from the inhabitants and other archives could be collected in branch libraries (63). In fact, Michele Micetich, President and Historian of Carbon Hill Historical Society, is collecting the memories from the children of old miners’ now (Figure 3.3). Carbon Hill is one of the six-post mining towns as the site in this thesis. Also, there are some kind of online memory data bank such as “Story Corps” (<http://storycorps.org/>) that may save some mining memories. We can imagine the possibility to set up branch libraries to collect such memory recordings, which is cultural and unique.

In addition, in order to get an open future to be explored with opportunities, Lynch believes that long-range actions should be expanded along a consistent direction, so that each “successive step visibly leads to the next one” (99). We could then propose *green trails*, as the selected existing or new trails, serve to provide such consistency. *Green trails* provide good accesses to the post-mining towns, good connections between cultural landscape features. For example, once a *green*

*trail* has been established to link between cultural landscape features, actions such as museums, research centers, performance stages, etc., can be established and expanded along the *green trails*, and new business or academic opportunities would follow afterwards.

In summary, following Kevin Lynch's instruction, "the buildings and equipment of the past" (53) should be valued; programs should be set up to convert the towns to be teaching media; and consistency between programs should be made to lead the occurrence of long-range actions.



**Figure 3.2** Algoma Coal Tipple 1936. (Photo: Ken Bowen).

## CYCLONE MEMORIES

**John B Darin (DaRin)**

John Darin was born in northern Italy, "right up against the Austrian and the Switzerland mountains". He was five years old when his father was in America working and sent the money for the family to come over to America. They landed in New York in 1894 and had to stay in the station all night sleeping on the benches. The next morning "they stuck a green tag on them because they couldn't speak English" and led them out to the depot to catch a train for Lockport, Illinois. John's father was working on the I&M canal there. He worked on the canal about three more years before his job was done and then the family went down to Carbon Hill where his dad got a job in the coal mine.

"Carbon Hill at that time was quite a few people. I imagine there was about 2500 people."

When John turned 12, he started to work himself on a farm near there and he got \$10 a month. After a few years working on the farm, he went down in the mine to work. He was 14 years old when he entered the mine. On the farm he had cultivated corn, cut hay, worked in the garden hoeing and weeding; the coal mine was a little harder work.

"See, the coal mine, you have six yards on each side of your road, and you have to dig the coal out of each side. And you have to build your road at the same time. You gotta take two or three feet of rock [out] so the car and the mule can come in and pull your car out. Your coal. So, I worked there about eight years at the coal mine; so one day we had an awful storm there, a cyclone, and the storm hit the tippie and blew it all down to the ground. So they brought in new steel to rebuild it, but they never got around to it. I don't know what happened, they just thought it just wasn't worthwhile to build it."

"Mining work was paid by the ton. I think it was \$1.35 a ton at that time [1912]. And if you could load four or five tons, you were doing pretty good. So when the tippie blew down, then we all had -- all the young fellows-- we had to leave town. Go and look for work some place else. The old people stayed there. Just the young fellows moved out. Of course, there were other mines around there. A lot of people went on to Cherry, Oglesby, South Wilmington, Morris, different towns were there were mines... as mines worked out or closed up the miners just moved on... I came to Joliet and started to work in the steel mills."

"My brother [Angelo Darin] had a leg crushed. He had to cut it off. He was riding in the front of a car when it was going downhill toward the main line. We had to push the cars out to the main line so the driver could pick it up, and my brother got his leg caught under the car and just....."

**Figure 3.3** Memory recording of old miner's child; from Michele Micetich.

*Rem Koolhaas--Tree City Concept (Czeraniak 2001)*

In 2000, Rem Koolhaas proposed a "flexible patchwork" as a catalyst to "turn Canada's central hub into a peripheral global city" in the international landscape competition for Downsview Park in Toronto, Canada (Czeraniak 2001, 74). The proposal worked for revitalization of the post-industrial site, by creating meaning between traffic connection and cultural interpretation. In a similar way, post-mining towns with meaningful culture which are surrounded with potential good traffic and transit connections, may have the possibility to achieve revitalization by following the Tree City concept.

Though the distance between the post-mining towns to the metropolitan city is much bigger than that of Downsview Park to Toronto, we could still consider the relationships between the sites with metropolitan cities to be very alike—they have proximity to metropolitan cities and transportation, and a predicted urbanized future (refer to chapter 5-1). Thus we could try to apply Tree City concept, which focuses on building connections, into the post-mining towns with the first problem of *isolation*.

In Tree City concept for Downsview Park, Koolhaas describes three phases to remediate, maintain, and urbanize the brownfield: first, site and soil preparation; second, pathway construction; and third, cluster landscaping (74). Pathway construction serves the major part in the concept: 1,000 pathways (Figure 3.4) were to be constructed for the park and diverse leisure activities were expected to grow along the pathways. With open and multifunctional accesses, pathways could change the park into a transportation hub, providing the park with the potential to be the playground for urbanites (74).



To utilize Tree City concept in this thesis, the method is redefined as *incremental urbanism*.

With multiple connectors and developing programs, the place could finally realize an urbanized future that is full of opportunities in culture, economy, education, industry, etc.



**Figure 3.4** Proposal of 1000 pathways in the Tree City concept (Czerniak 2001, 76).

## *Summary*

Neither Lynch's nor Koolhaas's theory mentions heritage study or anything about the specific post-industrial site. However, they do mention strategies to respect the past of a meaningful place, the way of converting a space as history-teaching device, and the method of connection to transform a relatively isolated place into an open transportation hub. And that is very helpful to revitalize the post-industrial towns for their history and culture. Because of this, this thesis adopts their ideas into the specific post-industrial site, draws conclusions from them, in particularly the strategy of *green trails* and *incremental urbanism*, then uses the strategy to maintain, connect, advance, expand, and revitalize post-mining towns.

#### 4. METHODOLOGY

The theoretical framework for this thesis is based on theories from Lynch (1972) and Koolhaas (2001). An interpretive strategy in five phases is proposed to contribute to the problem of *isolation* and cultural loss in post-mining towns: maintain, connect, advance, expand, and then maintain again in new process.

Because the environment containing features of the past is considered an excellent way of learning history (Lynch 1972, 53), beginning with site surveys, the most important cultural spots in the six-town study region were selected to be maintained with preservation or restoration. Next, existing and new trails were proposed to be *green trails*, and were mapped out to connect the cultural spots. Finally, the *green trails*' expansion would keep an open and accessible network full of business, academic, and industrial opportunities for the towns, and achieve the towns' revitalization.

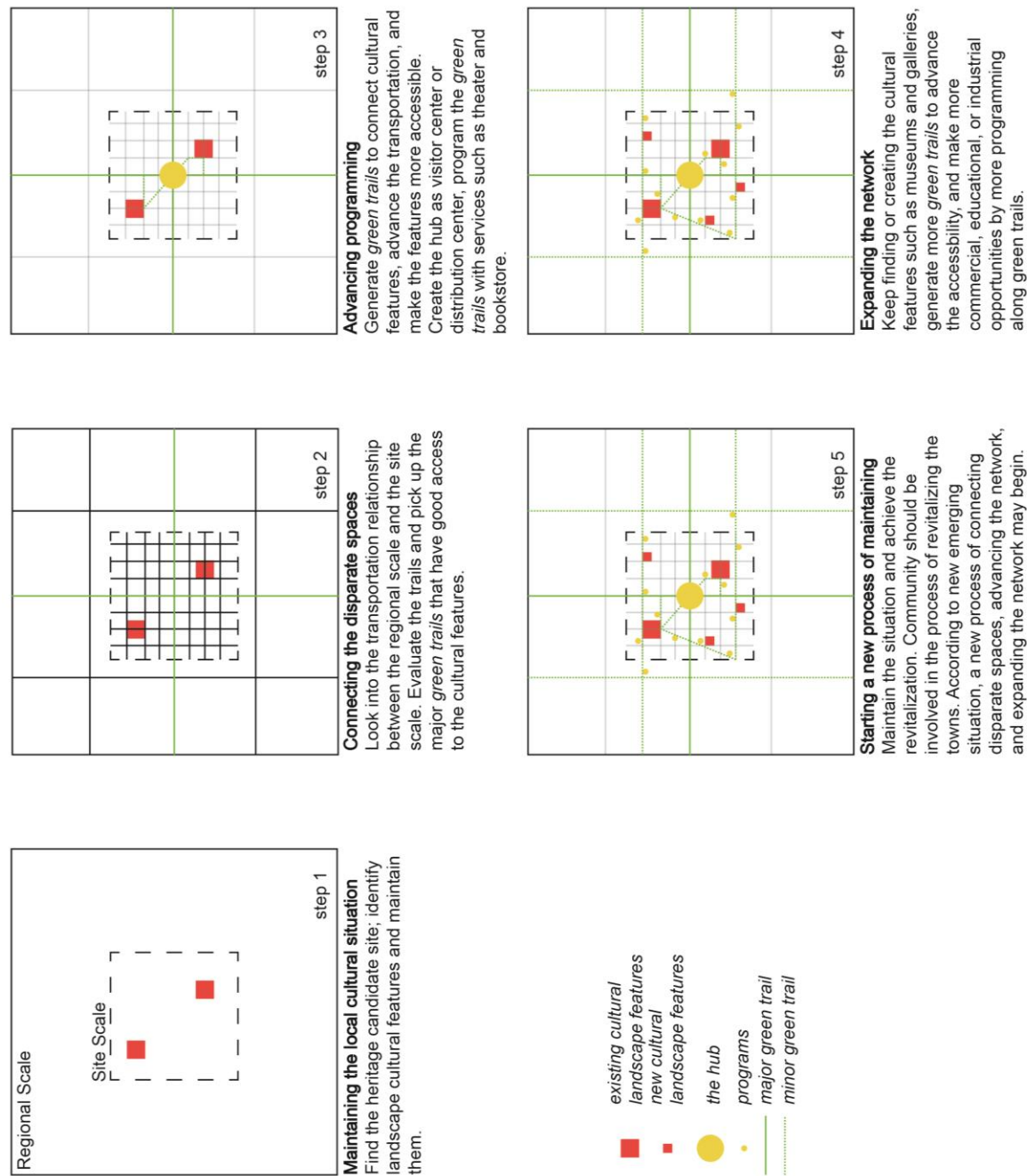
*Green trail* is proposed as an effective strategy that may help to link disparate cultural landscape features. It meets Lynch's request of consistency between programs, in the way of being a foundation for culture-related programs to locate in. Moving along the *green trails*, cultural programs provide the visitors the access to the post-mining towns, and indicate to them what landscape they are supposed to see. To set up programs around the cultural landscape features, in order to inform the visitors the history they are seeing, *incremental urbanism* was generated to be the theoretical framework. *Incremental urbanism* is an evolutionary process with successional programs, it could be understood as the idea of ecology restoration, which develops environment



condition by continuous planting or purifying. It adopts the basic strategy of Tree City concept, in which, the first step for remediating a brownfield is building an accessible patchwork, then programs a place with new activities as well as advancing old features that are suggested in Lynch's theory.

The strategy of *green trail* and *incremental urbanism* uses a cyclical process with five phases as figure 4.1 indicates:

1. maintaining the local cultural situation,
2. connecting the disparate spaces,
3. advancing programming,
4. expanding the network, and finally
5. starting a new process of maintaining.



**Figure 4.1** The strategy of *green trail* and *incremental urbanism* of five phases. Diagramed by the author.

## 1. Maintaining the local cultural situation

In the first stage, based on a thorough survey of site conditions as well as maps and historic documents, we should select what are the valuable sites or cultural landscape features of the heritage candidates, whether they represent cultural or historic value. In this thesis, features such as mounds, pit streams, and extant historic infrastructures are studied as parts of the uniqueness of the post-mining towns (refer to Chapter 5-2). Large spaces of open landscapes should be kept and prepared for further programming, and roads should be properly paved, appropriately linked, and in a good condition. Cultural artifacts and memory recordings should be collected as material exhibits in museums. Geologic analysts, historians, and community members are necessary in the process of conservation. These groups propose the necessary preservation for each of the features.

## 2. Connecting the disparate spaces

Depending on the location and situation of cultural landscape features, and also the surrounding transportation situation, some existing trails may be the good link between the features, and thus they should be developed and programed as *green trails*. If there is no such good existing trails that could be the link or access, we could create new trails as *green trails*, and use the *green trails* to connect the towns with other surrounding trails, thus breaking the isolated situation of the towns and transforming them as accessible transportation hub, to face new business, academic, or industrial opportunities. With open and multifunctional accesses, pathways could also change the post-mining towns into a transportation hub, as well as a cultural playground. (Czerniak 2001, 74).

Significant landscape features, such as icons or landmarks that are dispersed over different

spaces, would be connected in a series to tell different stories, and also should be adjacent to main forms of transportation. Building an accessible patchwork as the first step would enable the post-mining towns in being prepared for the next programmed step to be reached.

### 3. Advancing programming

Apart from the current needs that the infrastructures meet, more programs especially should be planned to satisfy the future needs. For example, if there is academic motive, we could set up observation platform, branch libraries, museums, galleries, studios, etc.; if there is spectacular motive, designing and constructing some fake coal tippers may be possible. Specifically, after the basic preparation of the landscape to be more protected and open for suitable construction, programming along *green trails* could be then started consistently. The visitor center should be set up to help visitors get to know a place, such as where and what the scenic and cultural landscape features are. Being an effective extension of the visitor center, the *green trails* would continue being the foundation for programs to be established on.

### 4. Expanding the network

In the post-mining towns, developing or increasing programming networks helps to tell a complete story about the area. Recurring factors may arouse the visitor's attention and strengthen the image of the post-industrial landscape, such as mounds, old infrastructures, etc. Considerable numbers of patchworks should be established; the hub should be as accessible as possible. Finally, the whole area of the post-mining towns would become a transportation hub.

## 5. Starting a new process of maintaining

Community members should be involved in the process of revitalizing the towns. For instance, they could set up competitions to generate ideas to get various visions of the future of the towns, and they could call volunteers to engage in the process of revitalization. As the culture keeps changing, new rounds of memory collection and imagining the bright future should be carried out. The established programs should be maintained and functional, and new programs should be planned depend on community needs and motives. Afterwards, a new process of connecting disparate spaces, advancing the network, and expanding the network may begin.

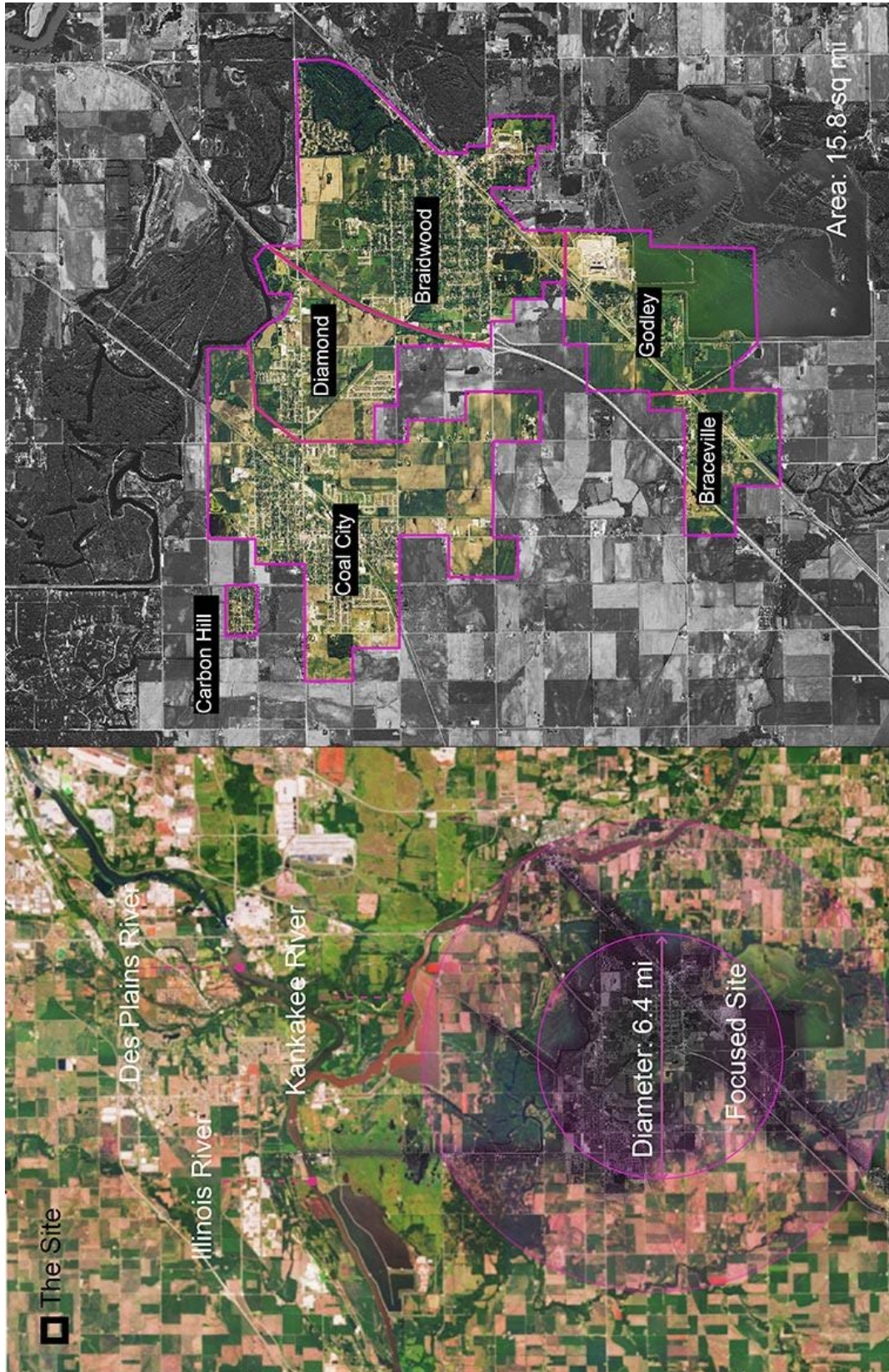
Finally, *green trails* become the catalyst, enabling post-mining towns to be accessible, more culturally memorable, programed, urbanized, and revitalized.

## 5. SITE SURVEY

The site survey begins with site visit and data collecting. This requires approaches that are both inductive and objective, including a general collection of facts and data about local social demographics, and environment of the mining districts, drawn from a range of available sources. The site research is composed of two parts: the regional survey and the site landscape features study.

The regional survey was collected and enhanced by the author, mainly from government document and GIS resources. It illustrates the potential of the six post-mining towns to be connected with surrounding existing trails. Site conditions were mapped and analyzed, including urbanization tendency, surrounding tourism trails, greenway system, highways, railroads, and wetlands. Nine key influencing factors for generating *green trails* were evaluated in the landscape features study. The regional survey and landscape features study led to the development of phases for revitalization and the location of *green trails* for connectivity.





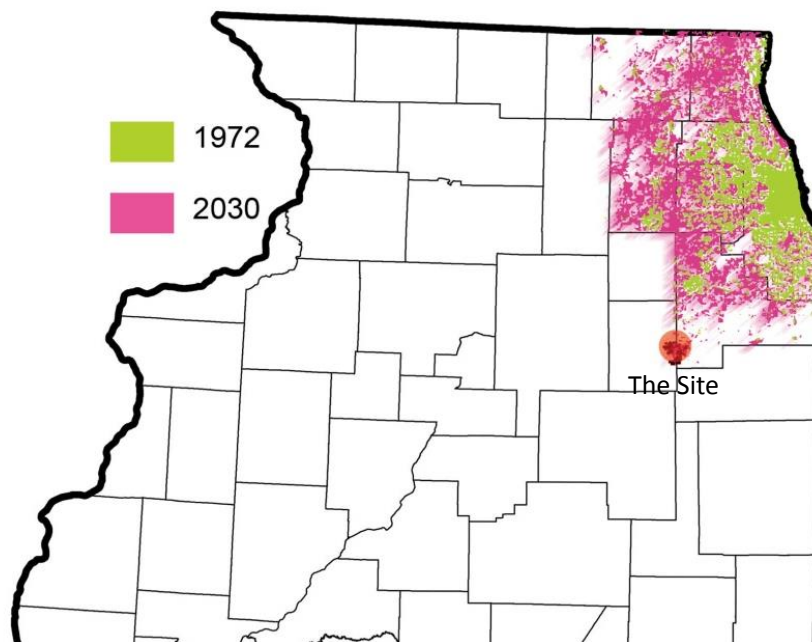
**Figure 5.1** Site aerial photo from Google Earth 2012;  
base map came from Google Earth, diagramed by the author.

The chosen site, comprising six post-coal-mining towns, occupies about 15.8 sq. miles with a diameter of about 6.4 miles (Figure 5.1). Most of the area is farm cover, and there are many lakes and streams occupying the coal pits that are in a very favorable condition.

The towns are predicted to be more urbanized in the coming decades by 2030 (Maps 2012). The six post-mining towns, all in the region south of Chicago, are Lake, Cook, Dupage, Mcclenry, Kane, and Will are predicted to meet with more business opportunities by the year 2030 (Figure 5.2). Preservation should be initiated to protect local heritage because the heritage could attract people's awareness of the area's industrial history and gain the locale a new reputation in the future urbanization.

The trails that have already been developed around the six post-mining towns would be one of the main access points for people to travel to the towns (Figure 5.3). Around the site, there are some tourist trails, such as the Wauponsee Glacial Trail that is a 22.3-mile paved/crushed limestone linear trail, offering activities such as biking, hiking, in-line skating, and so on (*Preserves & Trails / Wauponsee Glacial Trail* 2012). Also, the Illinois Grand Trail was built in 1992 to offer people a multipurpose recreational space, and is now the longest trail in Illinois. Part of the trail traces the Illinois River, which is next to the six towns (*Greenways and Trails: Grand Illinois Trail* 2013). Other tourism attractions include the EJ&E Railroad, which links the suburbs of Chicago, and people could use to access the six post-mining towns. Thus, the proposed *green trail* could be built to connect the post-mining towns with the tourism trails and programs, as well connect the metropolitan region to the ex-urban historic industrial sites.

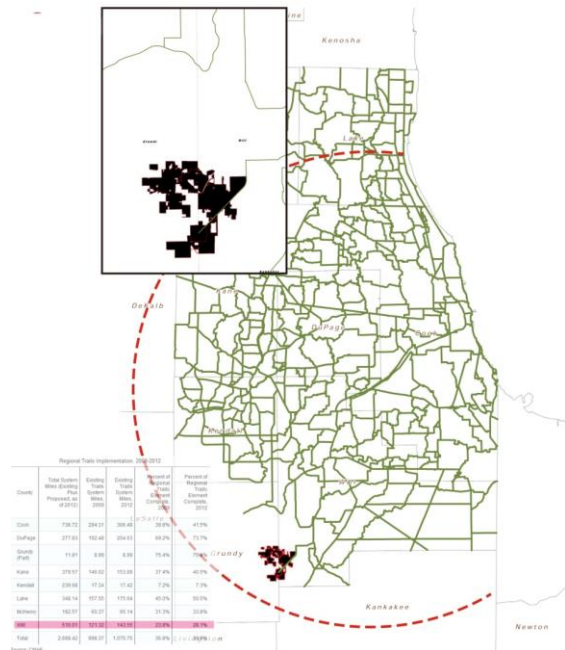




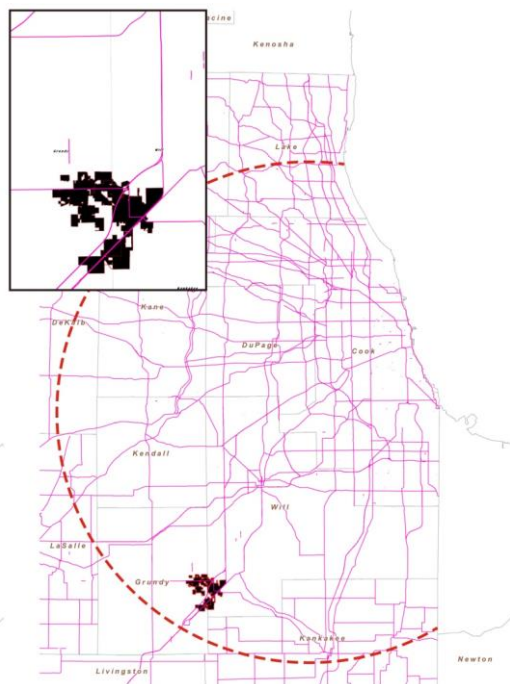
**Figure 5.2** Urbanization Tendency. Urbanization Chicago Region Land covered by development in the six-county region from 1972-2030 under the business-as-usual scenario; *Maps 2012*; modified by the author.



**Figure 5.3** Surrounding Major Trails. *Greenways and Trails: Grand Illinois Trail 2013, Main EJ&E Archive Railroad Map 2013, and Preserves & Trails / Wauponsee Glacial Trail 2013*; modified by the author.

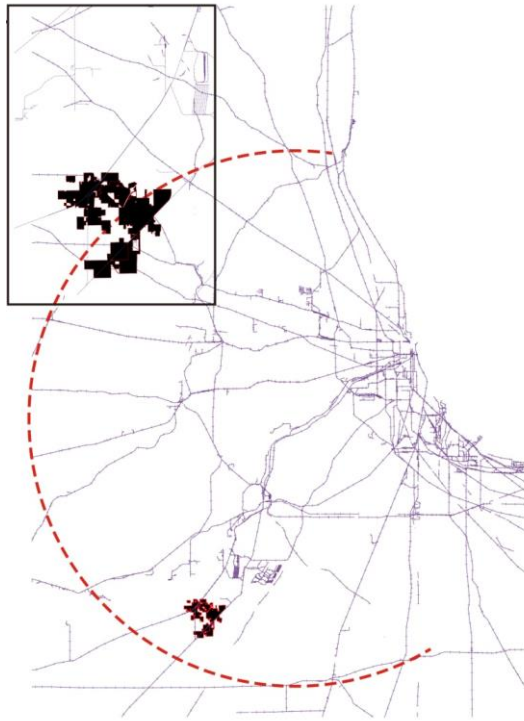


**Figure 5.4** North-Eastern Illinois Greenway System  
Geographic shapefiles for Greenways and Trails Plan 2013; modified by author.

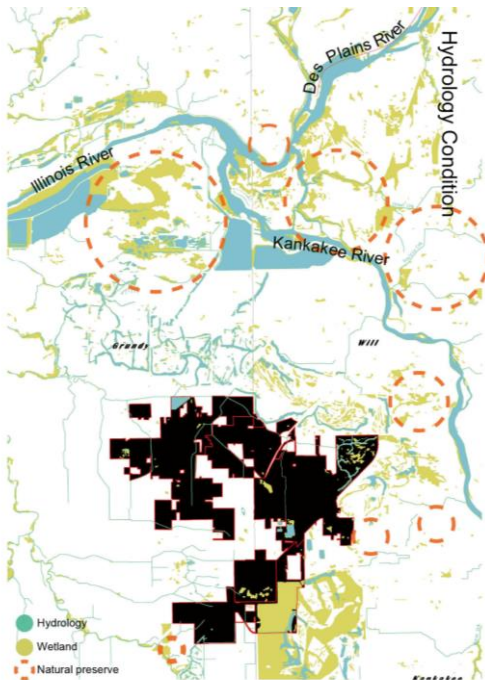


**Figure 5.5** Highways in Illinois. Data from the USDA; modified by author.

Next, it may be possible to connect the post-mining towns with the Greenway System (Figure 5.4). The Greenway is a "long-range, multi-jurisdictional plan which envisions a network of trails and greenways across northeastern Illinois" (*Greenways and Trails* 2012). It is used for recreational or pedestrian purposes, and provides people with a vegetated corridor away from the city. The system can also act as a guide for making connections between communities and other greenways and trails, thus obtaining infrastructure investment (*Greenways and Trails* 2013). Building green trails to connect the towns with the Greenway System could bring more business opportunities to the towns.



**Figure 5.6** Railways System. Data from USDA; modified by the author.



**Figure 5.7** Hydrology Condition. Data from USDA; modified by author.

Of the highways that cross the post-mining towns (Figure 5.5), Interstate 55 is key for local traffic and culture because part of it traces the historical Route 66, where the cultural features of the post-mining towns have been retained in places like the Illinois Route 66 Mining Museum. Making the six post-mining towns the heritage candidates will further enrich the culture along Route 66.

Historically, the relationship between mining and railroading (Figure 5.6) is intimate and is seen everywhere in the landscape of the six towns (Francaviglia 1991, 75). Francaviglia indicates that “Railroad equipment and the associated architecture of railroad lines helped to define the visual character of mining country” (75). The railroad is not only an important transportation system, but is also a cultural symbol that triggers people’s memory of the industrial time. Because of this, by

developing the green trail along the railroad, we can strengthen the image and provide an opportunity for visitors to view the landscape of post-mining towns.

Finally, nature always accompanies post-mining towns (Figure 5.7). In the past, coal was dug out from wilderness; now, the landscape after the end of the coal operation was remediated with new wilderness. Around the six post-mining towns, abundant natural resources as important attraction could be connected to the towns by the proposed green trail.

In conclusion, considering the advantageous environment around the six post-mining towns, and their culturally meaningful condition, the green trail will connect these resources to create an accessible network for the post-mining towns.

### *Site Landscape Features*

This low hill, with a tall, tower-like, form located on its highest point, provided us with bearings while also contributing to a feeling of unease. Somehow, the weight of its physical presence and history, of which – at that stage – little was known, could be felt. (Laviolette et al. 2011, 57)

Within the six post-mining towns, the landscape is special and similar. From a bird's eye view, the artificial mining operation has changed the landscape into a place full of "scratches" (Figure 5.8 and 5.11). Based on the cultural evaluation criteria for landscape features in literature review, and consulting with local community members, the cultural landscape features of the six post-mining towns can be divided into categories (Figure 5.12).

1. Mounds: Even though the mining over, mounds still occupy considerable areas in the towns, and they are the symbol of post-mining towns that is remarkable and identical.

They could be the landmark as that in Toluca, IL (Robertson 2006, 20);

2. Pit Streams: Most of the streams in post-mining towns are former coal pits (Figure 5.9), which were formed from “Power shovels” and “Earth-moving equipment” (Encyclopedia of Chicago 2004). They could be seen as symbol of the post-mining towns;
3. Industrial Traces: The traces formed by old or new operations, such as the traces left by the removal of factories, railways, miners’ housing, and active factories, which also factor into industrial memory. “Such old traces provide a link with the past and equally a link with industrialization, capitalism and migration.” (Baird 2012, 67)
4. Historic Architecture: This is infrastructure that existed in the coal mine operation days. Historic buildings could be excellent way for people to feel the history by playing themselves as actors between the real settings, even some fake historic buildings (Lynch 1972, 52)
5. Historical Features: Places such as Braidwood Museum that collected the mementos and materials from the coal mining society, old bridges, and the Diamond Monument that commemorates the historically significant coal flood disaster (Encyclopedia of Chicago 2004);
6. Nature Preserves: Many post mining towns are surrounded by nature preserves, like prairies, forests, and parks. Near the six post-mining towns, there are the Braidwood Dunes and Savanna Nature Preserve (Figure 5.10), Goose Lake Prairie State Park, Goose lake Prairie nature Preserve, Des Plaines Dolomite Prairies Land and Water Reserve, and others;

7. Recreation: Many recreational activities are present in the landscapes. Infrastructure for recreation has been well built, and it can provide old and new functions depending on future needs;
8. New Industry: The new nuclear power station that replaced the traditional coal mining industry is the new energy resource in the area. As new energy, it is could be seen as “aspirations for the future” (Laviolette 2011, 67), which displays a new process of industrialism;
9. Fossil: Abundant in mining and post-mining areas, fossils are collected for recreation; people could feel the identity of a post-mining town through touching the mining products;

The important landscape features (Figure 5.12) studied for this thesis are labeled in the map (Figure 5.13). The features are spread out over a wide area that could be connected and programmed.





**Figure 5.8** Aerial Photo of Forest Area and Trails. Only in post coal mining landscape the texture could be perceived, which was left by past strip mining activity. The dark blue area indicated the water area, and the green area indicates the forest. Photo is from Google Earth 2012.



**Figure 5.9** Aerial Photo of Farmland by a Stream and Trails. Though new farmland was constructed on the strip mining area, we can still see the texture. The stream was once the coal pit that could be as deep as 100 feet, but was filled with underground water. Photo is from Google Earth 2012.

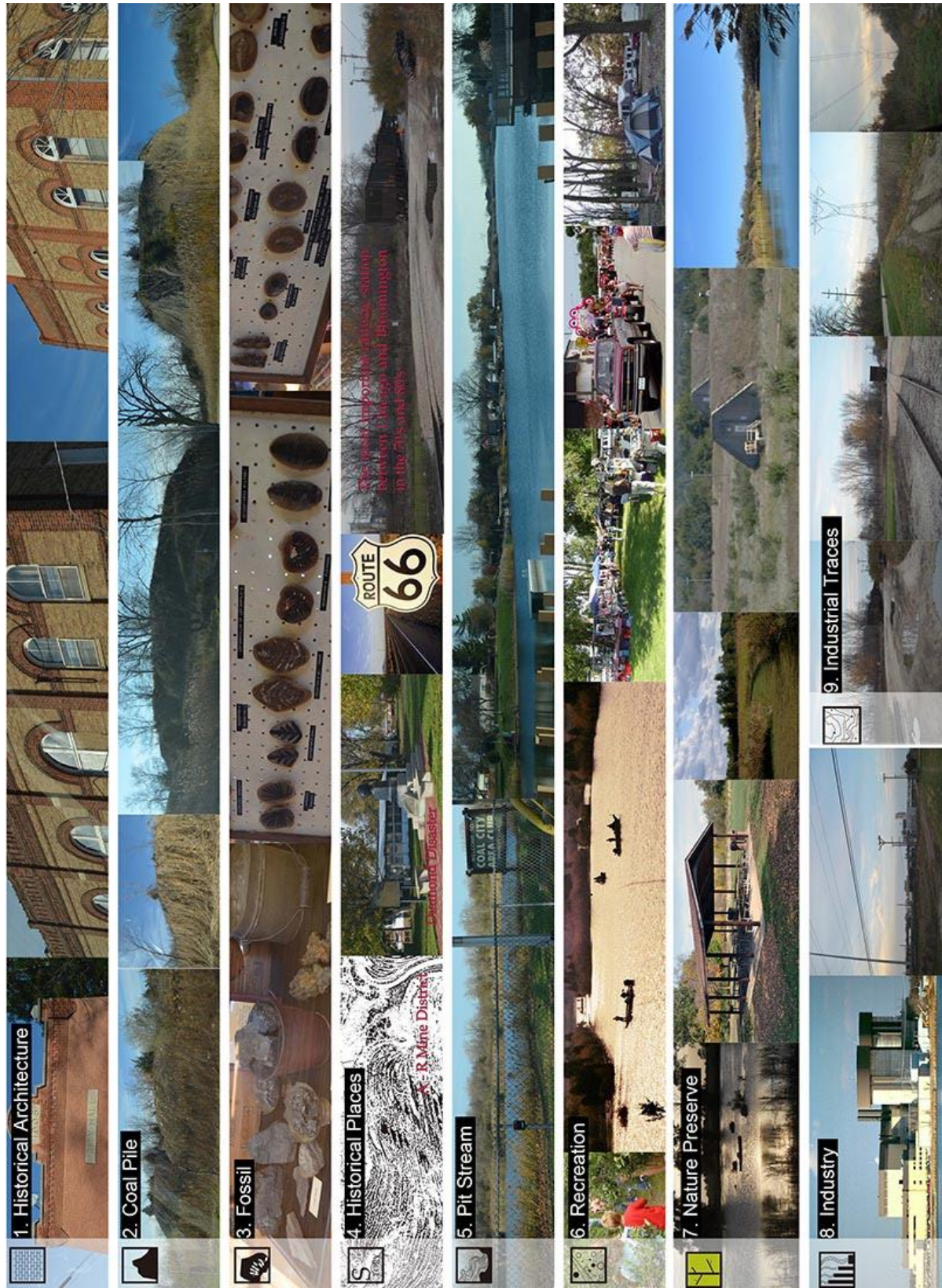


**Figure 5.10** Aerial Photo of Braidwood Dunes and Savanna Nature Preserve. Lot of post-mining landscape has been reforested in their later years, becoming recreational park or nature preserves. Photo is from Google Earth 2012.



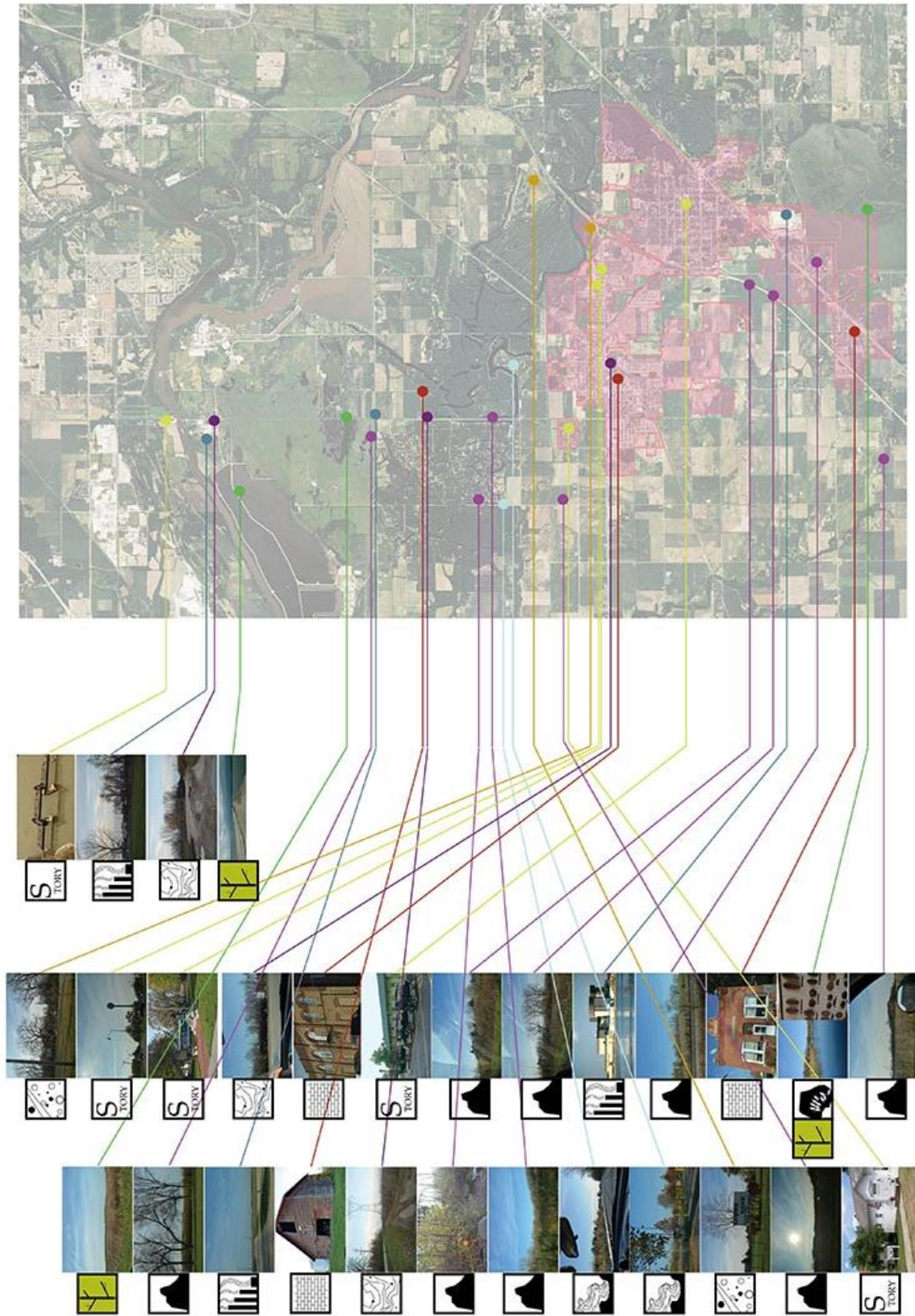
**Figure 5.11** Aerial Photo of Industrial Traces on Land of a Quarry. Other kinds of industries keep performing on the land, they serve as present industrial phenomenon and overlay post-industry, also visually tell an industrial story. Along the *green trails*, both new emerging industries and post-industries should be perceived. Photo is from Bing Map 2012.





**Figure 5.12** Important site landscape features. Photos are from author and diagrammed by author.





**Figure 5.13** Important site landscape features located on the map.  
Photos are from author and diagrammed by the author.

## 6. SITE DESIGN

Guided by the interpretive strategy, the design is staged into five processes (Figure 6.1). The site landscape features were overlaid on maps of different geographic condition (Figure 6.2, 6.3, 6.4, 6.5). The area between the features and different trails on maps would be the potential programming area. Specific programming area and *green trails* as shown on the master plan (Figure 6.6).

The processes began from the first phase of *maintaining the local cultural situation*, where the cultural landscape features--especially the nine site features are studied to be protected and preserved. One hub serving as a visitor center has been proposed in the master plan first (Figure 6.6). This site appears as a farm now located in the center of the six post-mining towns, and next to Braidwood—the first place where people found coal in Will County (Illinois-Mines 2012). It is also close to the historic Route 66, which is here merged with Interstate 55. The hub would serve as a visitor center for the six towns.

Then came the phase of *connecting the disparate spaces*, which valued the existing trails and potential land that could be generated as *green trails*, and connect the disparate spaces. Main roads, railroads, and greenways were considered as key trails in this phase.

First, main roads are the most effective access for people to get into the towns (Figure 6.7). Trails that connected to main roads are secondary access to recreation and historical places. *Green trails* then would be selected and developed from the most important roads because of their close relationship to cultural or environmental resources. Performance stages should be established

along such *green trails* (Figure 6.13).

Secondly, railway is a ubiquitous sight in mining towns, and passing trains loaded with coal were the classic image of post-mining towns. Train stations would be established along the passenger railway in mining towns, and trail with programs built along freight railway would provide the viewers a direct scene of industry and production (Figure 6.8). Trains would both be viewed by people and provide stage for visitors to view local attractions. Programming along the railway, such as open public space, grassland, and activity centers to attract people's attention would provide a space to participate locally and to experience nostalgic industrial moments (Figure 6.12).

And thirdly, along the greenways, there are abundant coal pit streams available for people view (Figure 6.9). The streams are in an area that was once coal pits, where the landscape seems artificial, but filled in with underground or surface water afterwards. Generally, near the streams there are mounds and hilly terrain, which are also visually impressive and convey the image of the past mining production. Across the lakes and streams, platforms would be built along the bank on the *green trails*. Infrastructure such as benches, bike racks, billboards on the road side to show historical images and other services should be set up (Figure 6.10).

The next stage is *advanced programming* along *green trails*. *Green trails* as the extension of the hub would be established and enriched with new cultural programs. In view of generating main roads as the effective *green trails*, historic Route 66 would be an important feature in the middle of the six post-mining towns. The area along Route 66 should be a focus of programs. Mounds formed during the process of strip mining are visible in the landscape of post-mining towns. There

are mounds that are still in place that would be landmarks to be appreciated. Stages set at right place could attract people's attention, they could choose to stay, look, and enjoy the landscape.

(Figure 6.11)

Additionally, the phase of *expanding the network* continues the work of making connections. New potential *green trails* would be far more densely generated, and considerable numbers of patchworks should also now be established; the hub should be as accessible as possible. Finally, the whole area of the post-mining towns would become a transportation hub.

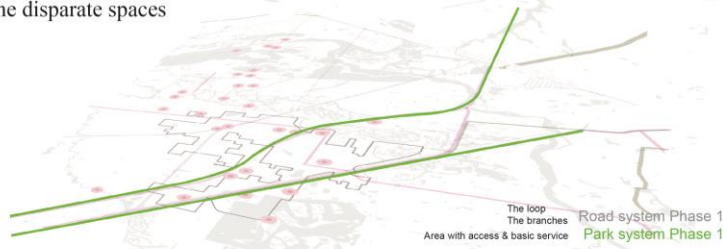
Finally, after the previous four phases are completed, *a new process of maintaining* would be started. Maintenance should be the key action of this phase. Community should be involved in the process of revitalizing the towns. They could organize meetings to discuss and make plans for solving the old or new problems in the process of urbanizing the post-mining towns. And they could also set up competitions to generate ideas to get various visions of the future of the towns, and call volunteers to engage in the process of revitalization.

Maintaining the local cultural situation



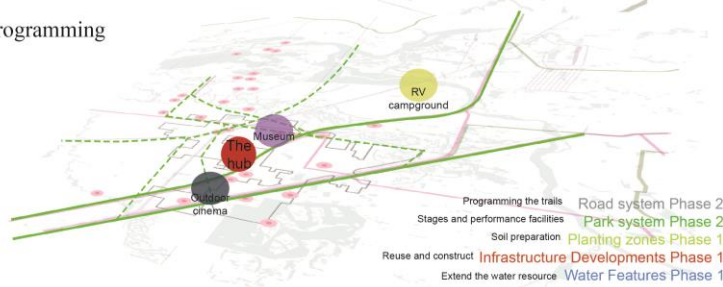
The cultural landscape features are protected and preserved

Connecting the disparate spaces



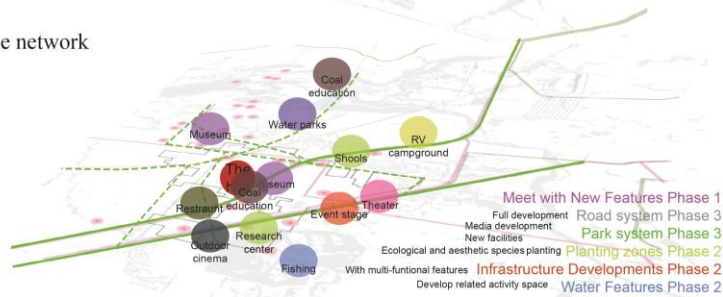
Green trails connect the disparate landscape features.

Advancing programming



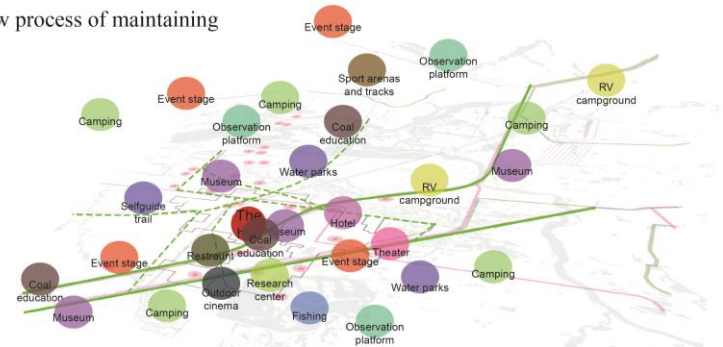
Visit center is proposed to be the hub, programs keep growing.

Expanding the network



More green trails and programs are generated based on previous programs development.

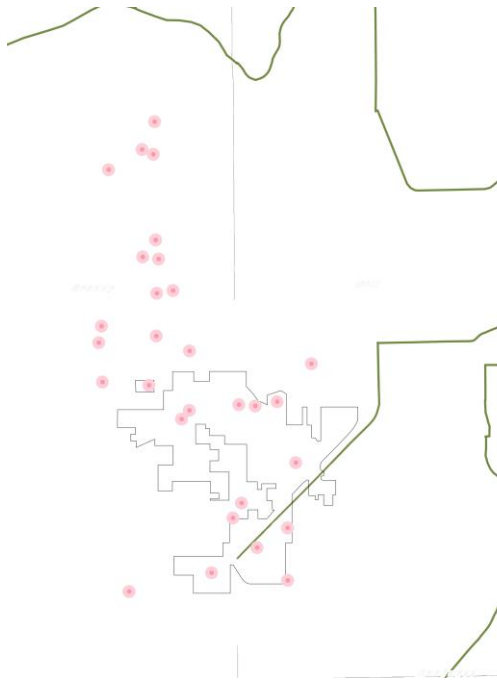
Starting a new process of maintaining



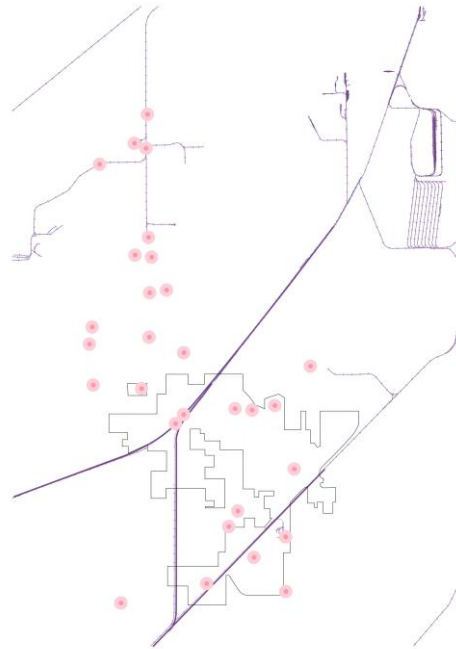
New programs and emerging culture need to be maintained by communities or volunteers.

**Figure 6.1** Interpretive strategies for the site. Diagramed by the author.

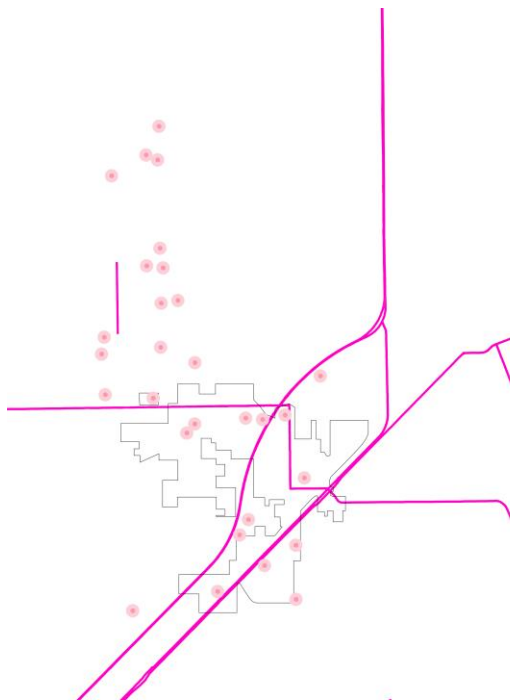




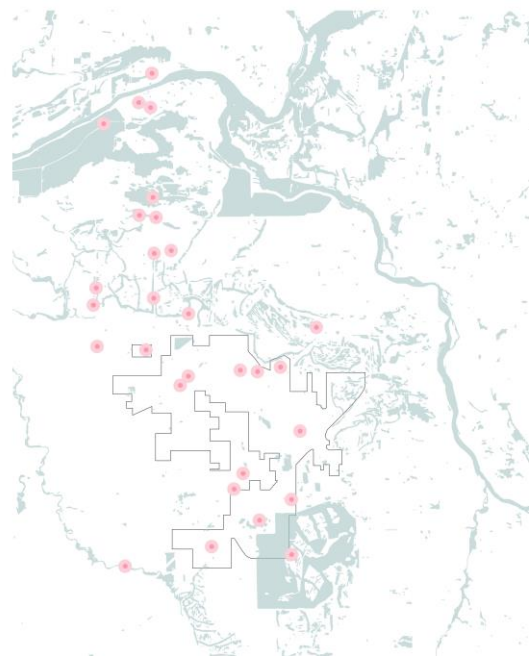
**Figure 6.2** Site Landscape Features Overlaid with Greenway System; data from *Geographic shapefiles for Greenways and Trails Plan 2012*; Diagramed by author.



**Figure 6.3** Site Landscape Features Overlaid with Railroad System; data from USDA; Diagramed by author.

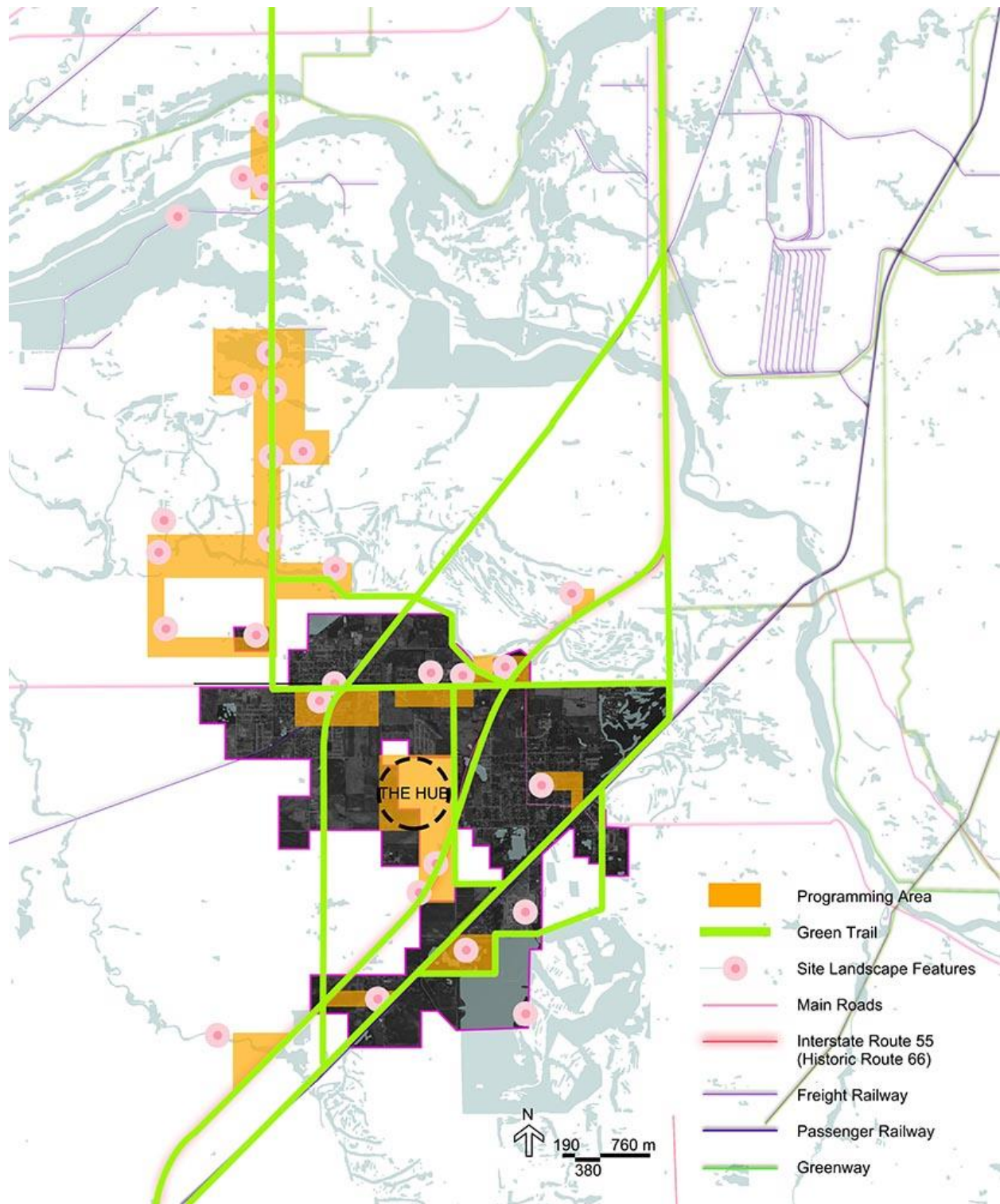


**Figure 6.4** Site Landscape Features Overlaid with Main Road System; data from USDA 2012; Diagramed by author.

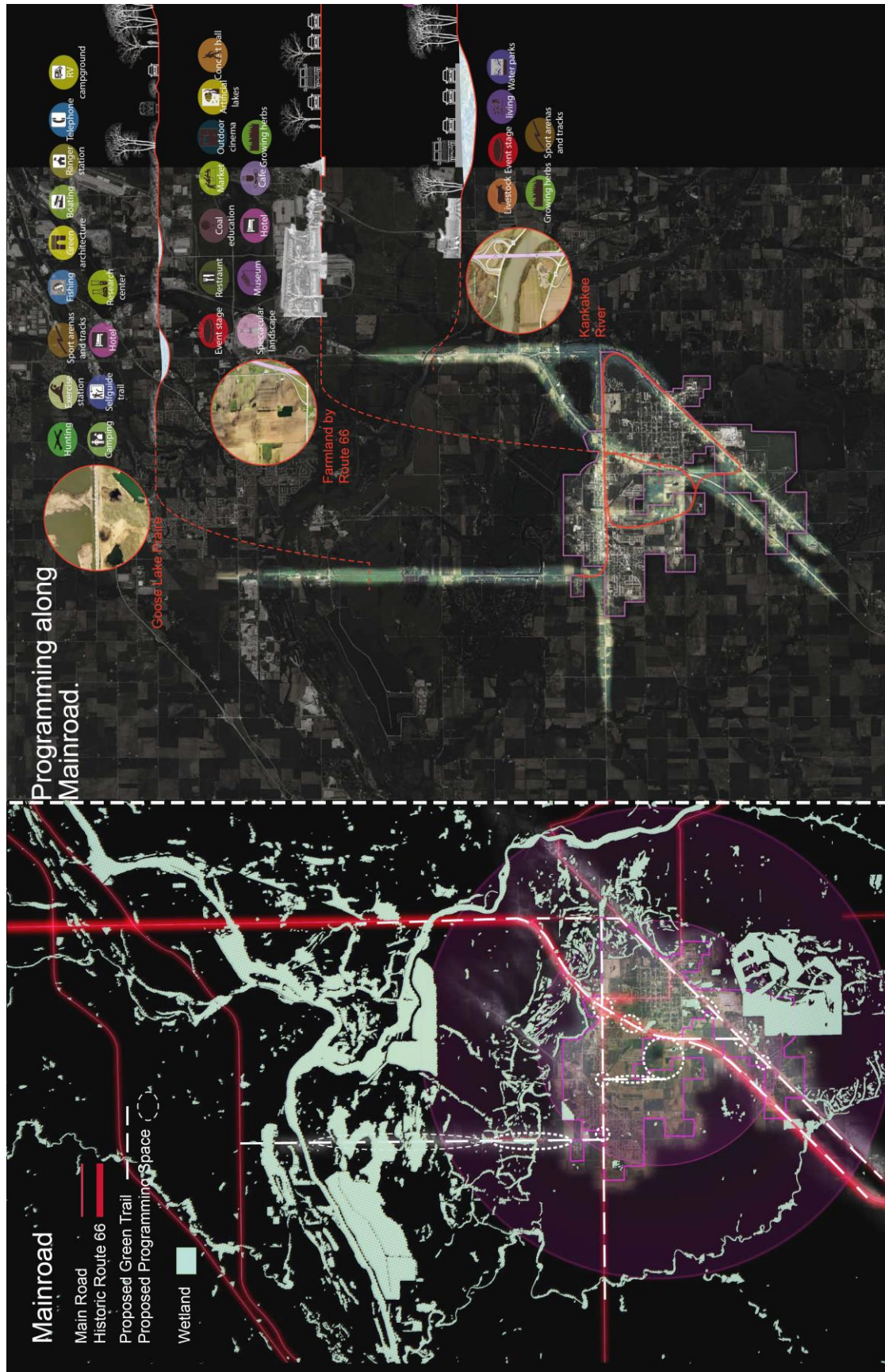


**Figure 6.5** Site Landscape Features Overlaid with Wetland System; data from USDA; Diagramed by author.



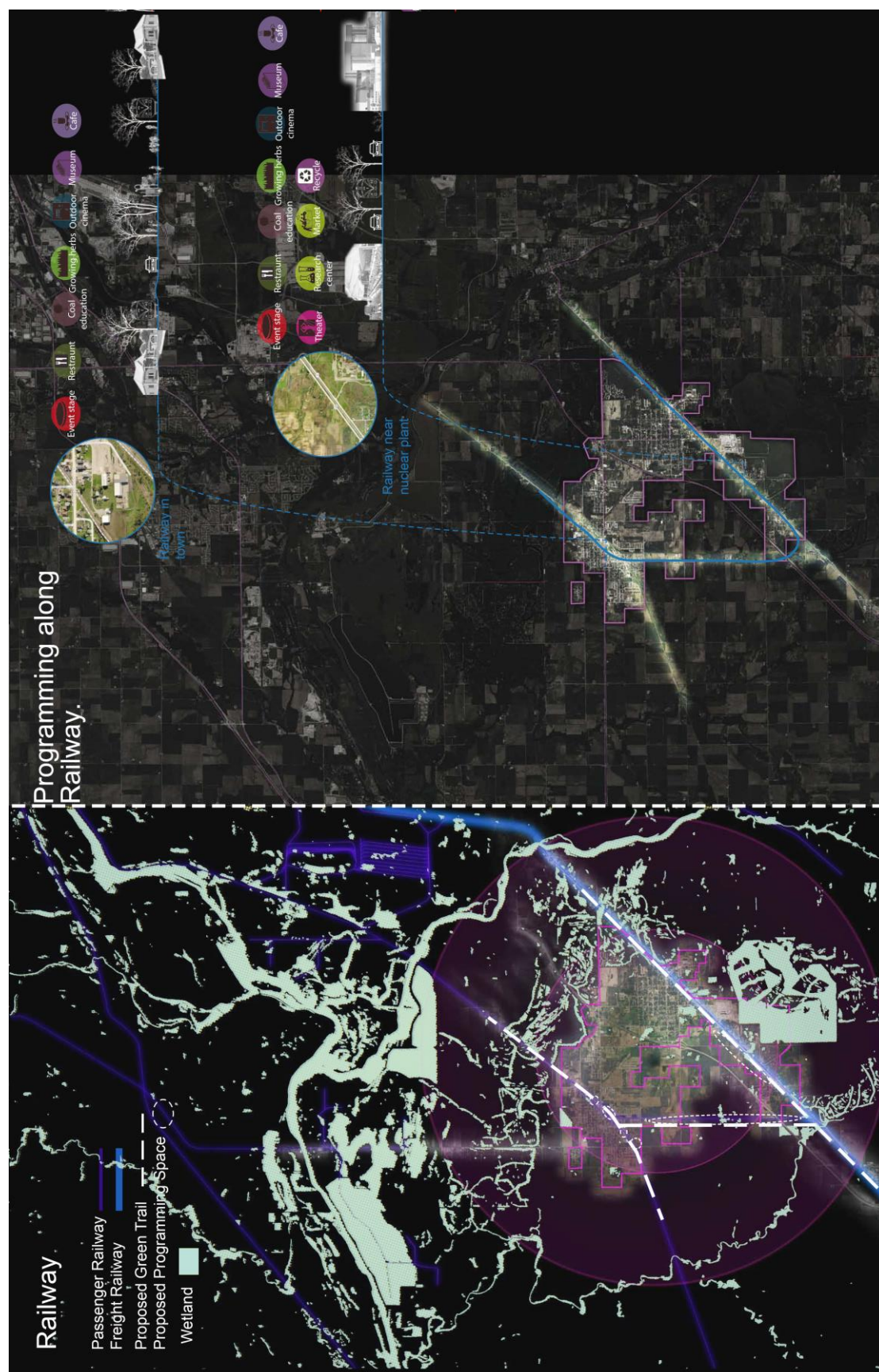


**Figure 6.6** Master Plan. Base map comes from Google Earth 2013. Diagramed by the author.



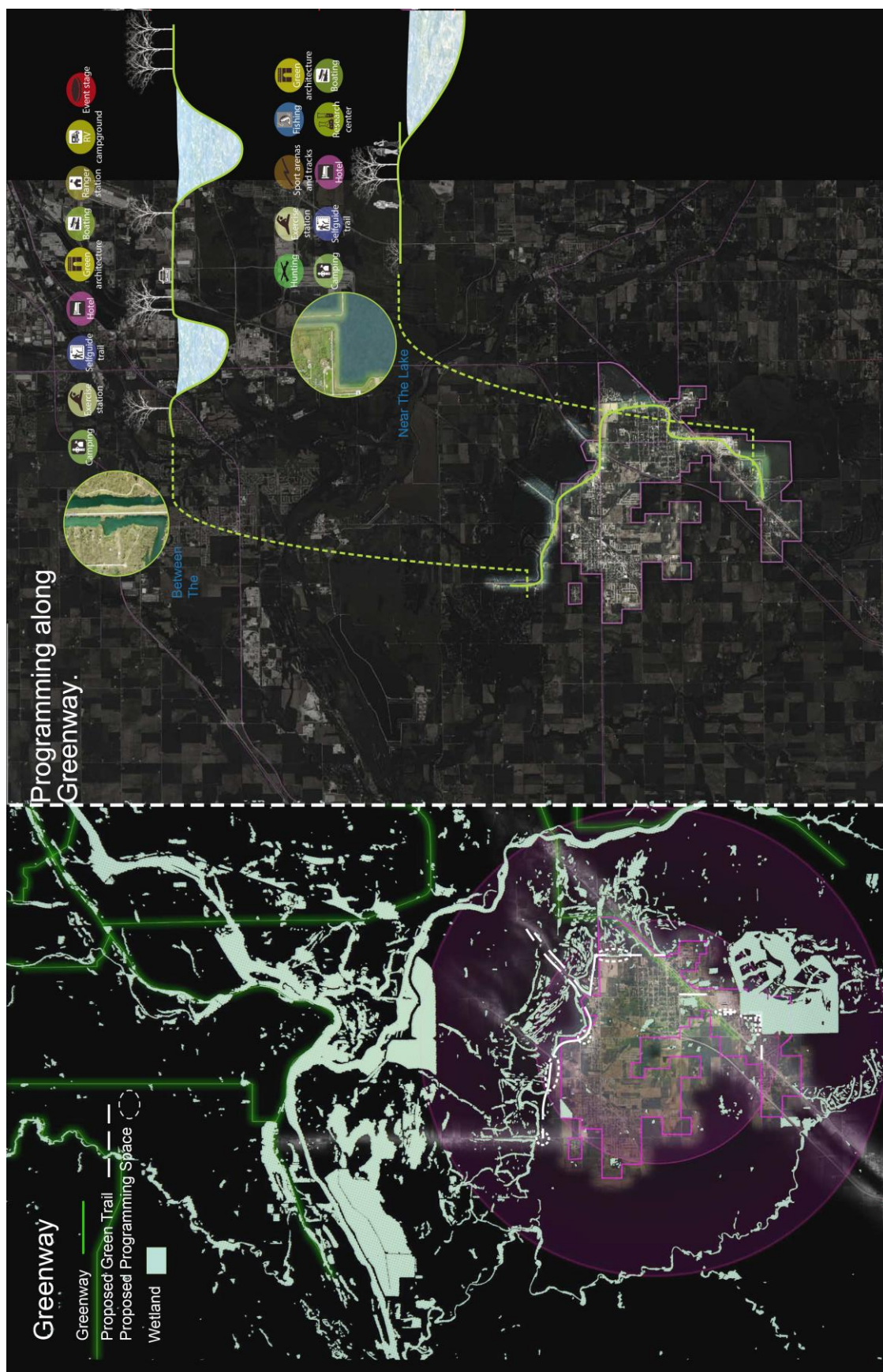
**Figure 6.7** *Green trails along main roads.*  
Base map from USDA. Diagramed by the author.





**Figure 6.8** *Green trails* along railways.  
Base map comes from USDA, Diagramed by the author.





**Figure 6.9** *Green trails along greenway.*  
Base map from USDA; diagramed by the author.



**Figure 6.10** Perspective View along the *green trail* near The Lake. Diagramed by the author.





**Figure 6.11** Perspective view along the *green trail* near mounds. Diagramed by the author.

NOW



NEAR FUTURE



FUTURE



**Figure 6.12** Perspective view along the *green trail* near railway. Diagramed by the author.



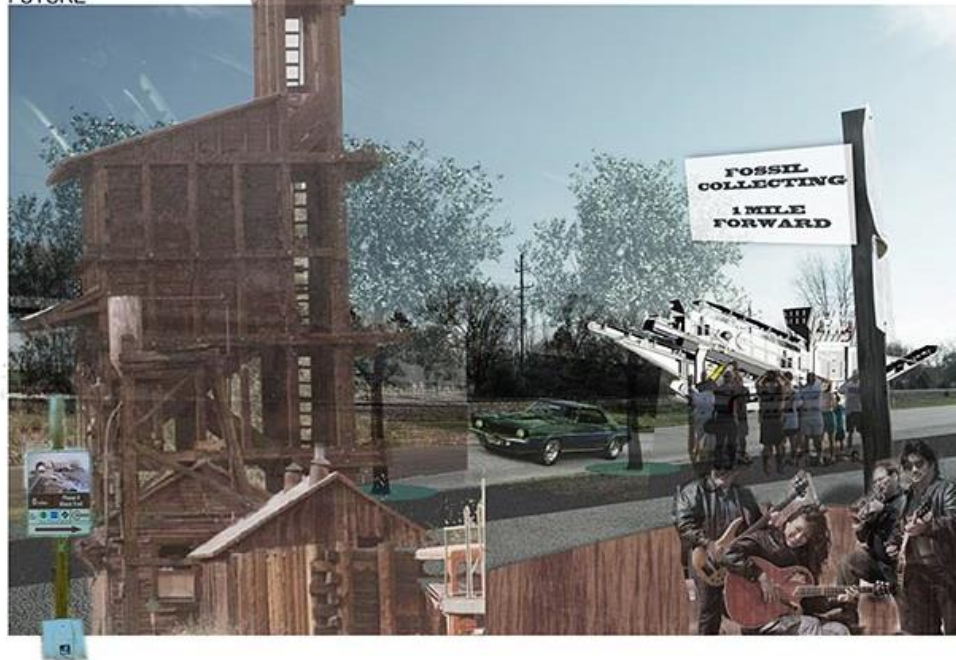


NEAR FUTURE

NOW



FUTURE



**Figure 6.13** Perspective view along *green trail* near a main road. Diagramed by the author.

## CONCLUSION

There is an opportunity for landscape architects, planners, and community leaders to rethink *incremental urbanism* and use that concept in the revitalization of post-mining towns. By developing *green trails* with public process-based programming, designers can enhance awareness of the historic and symbolic value of industrial culture. With appropriate construction and reprogramming of mining landscapes, and with proper stewardship and maintenance, communities can devise the best way to connect mining landscapes with people and nature. *Green trails* are a feasible and low-cost way for almost any post-mining town to improve its current economic, cultural, and historical situation, and provide the public with a living museum to understand the industrial heritage of modernism.

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